



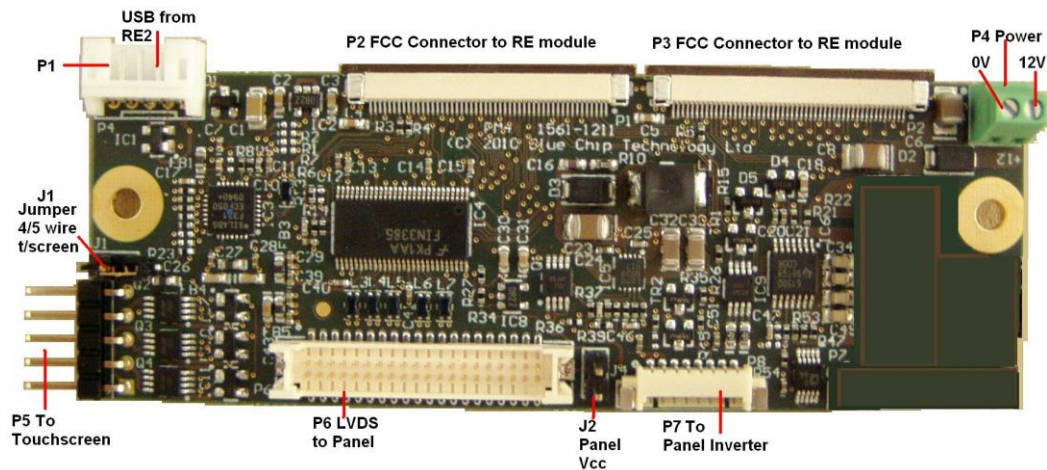
Personality Module v4

User Guide

Product Outline

The Personality Module v4 is a small interface module designed to allow LVDS displays and touch screens to attach to the Blue Chip Technology RISC Engine series of processor boards

Personality Module

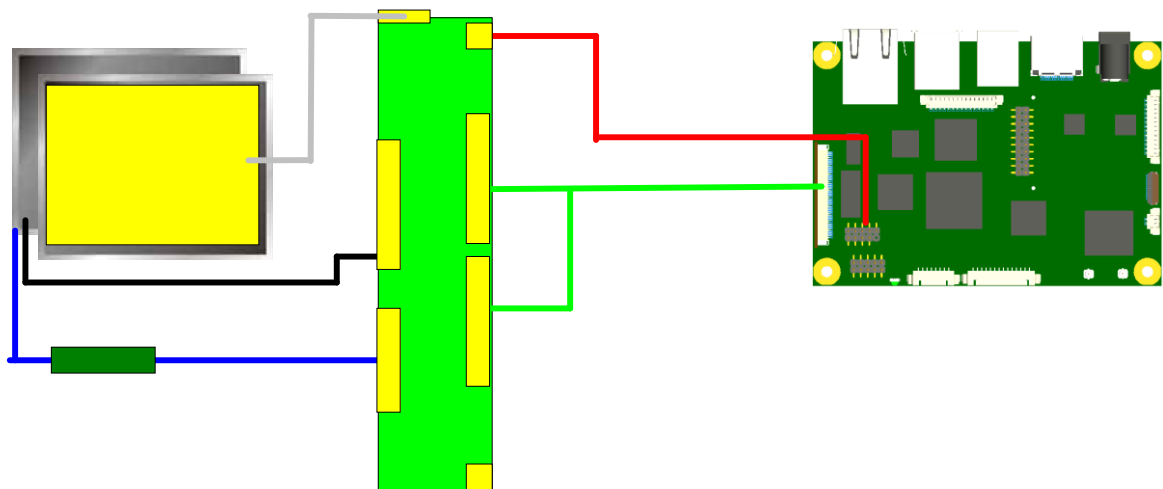


The Personality Module has a number of connections as shown above. Altogether 5 cable connections are required and a jumper setup is required.

J1: Fit for 4 wire touch screen / no fit for 5 wire touch screen

J2: Fit for 3V3 Panels / no fit for 5V Panels

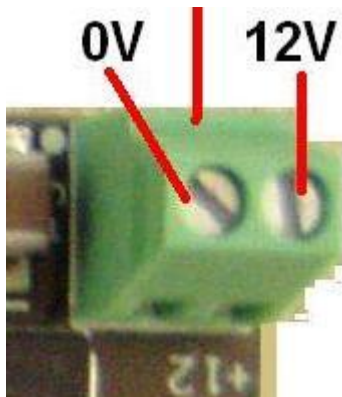
Connection Overview



Connector Details

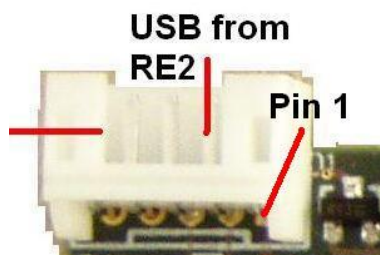
P4 - Power

The P4 connector accepts 12V in order to power the backlights on certain panels or the inverter if one is used



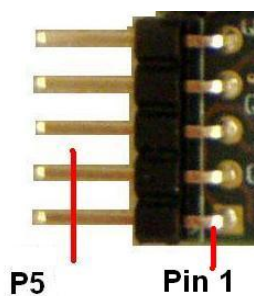
Power is connected as shown on the left

P1 - USB



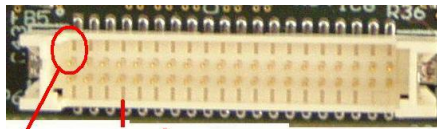
Pin	Detail
1	5V (red)
2	USBN (white)
3	USBP (green)
4	0V (black)
5	0V

P5 - Touch Screen



Pin	Detail 5 wire	Detail 4 wire
1	Down / UR(H)	Up / UL(Y)
2	Right / LR(X)	Right / LR(X)
3	NC / Sense	
4	Up / UL(Y)	Down / UR(H)
5	Left / LL(L)	Left / LL(L)

P6 – LVDS Connection to Panel



Pin 1

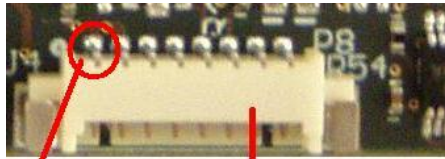
P6 LVDS
to Panel

Pin	Definition	Pin	Definition
1	12V	2	12V
3	GND	4	GND
5	VDD (Panel Voltage via J2)	6	VDD (Panel Voltage via J2)
7	Brightness Control	8	GND
9		10	
11		12	
13		14	
15		16	
17		18	
19	TX3_P	20	TX3_N
21	TCLK_P	22	TXLK_N
23		24	
25	TX2_P	26	TX2_N
27	TX1_P	28	TX1_N
29	TX0_P	30	TX0_N
31		32	
33	GND	34	GND
35		36	
37		38	
39	Backlight On	40	LCD On

Pins highlighted are only used with a non-inverter based panel display

Where inverter is required, use connector P7 instead

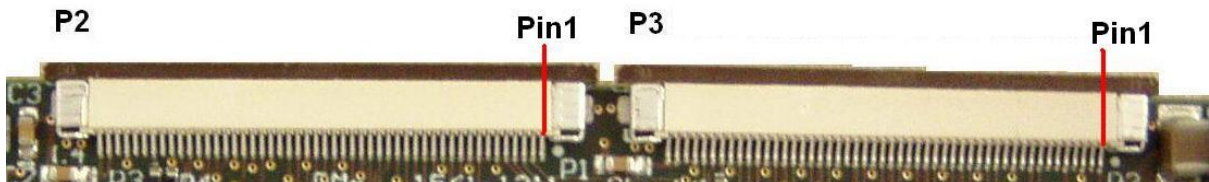
P7 – Inverter



P1 **P7 To**
Panel Inverter

Pin	Detail
1	12V
2	12V
3	0V
4	0V
5	ENABL
6	BRIGHTNESS
7	0V
8	N/C

P2 / P3 – Connection to REx Module



The Personality Module connects to the Risc Engine via a 50 way FFC (Flat Flexi Cable). Depending on your Panel type use the connections as follows

P2 – for 24 bit panels (MSB on extra LVDS pair TX3)

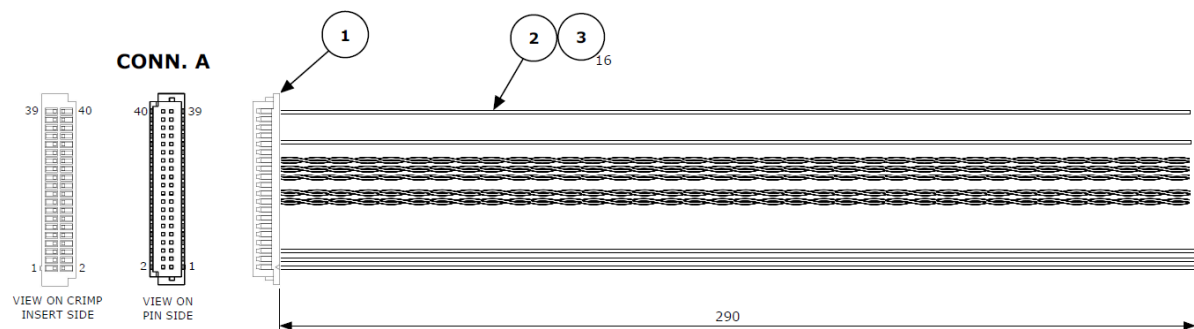
P3 – for 18 bit panels (but it may suit some 24 bit panels with LSB on extra LVDS pair TX3)

Sample Cables

The Personality Module can be supplied with cables. Sample cable drawings have been provided below in the event that customers require to create custom cables to suit their own applications.

Display

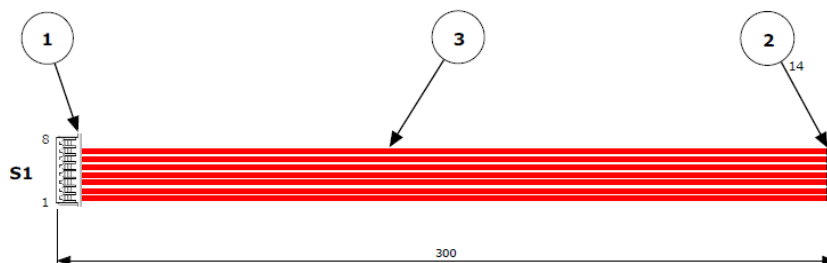
Item:	Code:	Qty:	Description:	Distributor:
1	Hirose DF13-40DS-1.25C	1	Housing 2x20 pin 1.25mm pitch	Farnell 132-4940
2	Hirose DF13-2630 SCF	16	Crimp 26-30AWG	Farnell 132-4944
3	-	as reqd.	Wire, UL1007, 28AWG, stranded	--



Note: Cable is open ended as there is no common connector that is suitable for all possible display options

Inverter

Item:	Description:	Qty:
1	Con Crimp Housing 1.25mm 8 way Molex 510210800	1
2	Crimp Terminal Female Molex 500588100	14
3	Wire 28AWG 7X0.127 (Alternative Molex 6660013)	A/R



Note: Cable is open ended as each Inverter option may have different connection options

USB Cable

Item:	Description:	Qty:
1	Con Crimp Housing 2mm 10 way Molex 051110-1050	1
2	Crimp terminal Molex 50394-8100	5
3	Con crimp Housing 2mm 5 way JST PHR-5	1
4	Crimp Terminal JST SPH-002T-0.5S	5
5	Pin Polarizing	1
6	Cable USB2.0	A/R
7	Heat-shrink sleeving Farnell 496-7148	A/R
8	Heat-shrink sleeving Farnell 496-7185	A/R

